DOCUMENT RESUME

ED 379 586 CG 026 090

AUTHOR Collins, Carla B.
TITLE Hardiness as a Stress Resistance Resource.
PUB DATE [92]
NOTE 11p.; Paper presented at the Annual Meeting of the American Psychological Association (101st, Toronto, Ontario, Canada, August 20-24, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Adolescents; Children; Coping; Daily Living Skills; Elementary Secondary Education; Maturity (Individuals); *Self Efficacy; Self Esteem; Social Desirability; *Stress Management; Stress Variables; Student Behavior
IDENTIFIERS *Hardiness; New York (New York)

ABSTRACT

One of the most important stress resistance resources emerging from research in adults has been the hardy personality (Kobasa, 1979). Identification of such a personality characteristic in young adults would provide some understanding of how some individuals emerge from a period of instability and change with the skills that help them adapt in a variety of social situations. Therefore, this study was designed to assess the effects of stress and hardiness in an adolescent population. Following a factor analytic approach, a reliable hardiness scale for adolescents was constructed and administered to a sample of inner city youth (ages 11-16, N=223). Empirical support for looking at hardiness as a stress resistance resource was found. Hardiness acted as a buffer, moderating the effects of stress for drug use, and was directly influential in the prediction of aberrant behavior (rebelliousness, socially deviant attitudes, and repression) and affective reactions (depression and family discord). However, gender was also identified as an important variable for predicting behavioral adjustment. The negative relationship between sex and behavioral adjustment indicated a tendency for males to report more socially deviant attitudes, rebelliousness, and repression than females. It was determined that social desirability, age, and sex should be important considerations when interpreting research findings or developing support programs for adolescents. (RJM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 379 586

Hardiness as a Stress Resistance Resource

Following a factor analytic approach, a reliable hardiness scale for adolescents was constructed and administered to a sample of inner city youth. Empirical support for the conceptualization of hardiness as a stress resistance resource was found. Hardiness acted as a buffer, moderating the effects of stress for drug use and was directly influential in the prediction of aberrant behavior (rebelliousness, socially deviant attitudes and repression) and affective reactions (depression and family discord). It was determined further that social desirability, age and sex were important considerations when interpreting research findings or developing intervention programs for adolescents.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY

Carla B. Collins

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

CG026090

Hardiness as a Stress Resistance Resource in Adolescents

Carla B. Collins
Graduate Center, City University of New York

Adolescence, typically, is the period of life in which an individual is expected to achieve a measure of independence and autonomy from primary caretakers and to establish an identity which harmoniously integrates aspects of the self with the environment. Investigations into the factors influencing successful adaptation from childhood into adulthood, particularly under adverse conditions, have pointed out the importance of personality.

One of the most important stress resistance resources emerging from research in adults has been the hardy personality (Kobasa, 1979). Identification of such a personality characteristic in young adults would provide some understanding of who emerges from a period of instability and change with skills that help them adapt in a variety of social situations. Thus, a study was designed to assess the effects of stress and hardiness in an adolescent population.

Following a factor analytic approach, a reliable hardiness scale for adolescents was constructed and administered to a sample of inner city youth. Empirical support for the conceptualization of hardiness as a stress resistance resource was found. Hardiness acted as a buffer, moderating the effects of stress for drug use and was directly influential in the prediction of aberrant behavior (rebelliousness, socially deviant attitudes and repression) and affective reactions (depression and family discord). It was determined further that social desirability, age and sex were important considerations when interpreting research findings or developing intervention programs for adolescents.

Methodology

Development of the Hardiness Scale for Adolescents (HSA)

Development of a hardiness scale for adolescents followed a modified version of Jackson's (1971) approach to scale construction. Initially, items from the 50 item adult scale (Kobasa, 1979b; 1982a) were adapted for an adolescent population (e.g., work related items were reworded into school items, examination for biases). The hardiness scale then was administered to a small, heterogeneous group of adolescents to determine whether hardiness could be identified and measured in adolescents. As a result, eight items failed to produce any variance in responses. These items were either rephrased or dropped and new items were written.

A second preliminary study involved the administration of the HSA in conjunction with other measures to determine preliminary reliability and validity estimates. The alpha reliability of the HSA ($r = .64$), fell below acceptable reliability levels for early scale development (Nunnally, 1978). Furthermore, responses to some hardiness items were positively skewed suggesting the presence of response bias. To substantiate this finding, item-total correlations were reviewed. Nineteen items were found to have a negative or very low positive relationship with the total test. The 31-items retained demonstrating an acceptable internal consistency ($r = .81$), were then subjected to a principal components factor analysis. Six factors, goal directedness, commitment to self, commitment to school, control, adaptability and problem-solving orientation were identified. Items within each factor were reviewed and any item loading less than .35 on the primary factor and/or having a loading similar to the primary factor were dropped or rephrased. In addition, in order to reduce the influence of acquiescent response bias, items were written so that the final scale had equal numbers of positively phrased and negatively phrased items. The resulting HSA contained 36 items, three positively phrased and three negatively phrased items for each of the six factors.

Stress Resistance in Adolescents

Sample. Participants ranging in age from 11 to 16 years of age and mirroring the ethnic distribution of public school students were recruited from the New York City School System. Of the 223 volunteer students, 58.3 percent were females while the other 41.7 percent were male.

Measures. Based upon prior research of hardiness in adults and adolescent theory, the following instruments were administered:

1) Youth Adaptation Rating Scale

2) Coopersmith Self-Esteem Inventory

3) Social Desirability, Acquiescence, Defensiveness Scales

4) Health practices, constitution and demographics

5) Multidimensional Outcome Measures
   a) affective reaction (depression and family discord)
   b) aberrant behavior (rebelliousness, socially deviant attitudes, repression)
   c) strain (subjective stress, somatic complaints)
   d) school absence
   e) drug use (cigarettes, wine, beer, liquor, cocaine, marijuana)

6) Hardiness Scale for Adolescents
   Following a three factor varimax rotation, items were eliminated from the hardiness scale if they loaded less than .3 on the primary factor and/or loaded on other factors within .05 of the primary factor. Alpha reliability of the 26-item hardiness scale was .65, a slightly less than acceptable level. Inspection of the item-total correlations showed that 3 items were either negatively correlated or had very low correlations. When these items were dropped, the internal consistency of the 23-item HSA reached an acceptable level ($r = .73$).

Results and Discussion

Hardiness in adolescents demonstrated statistically significant negative correlations with stressful life events ($r = -.36$, $p < .001$) and the multidimensional outcome measures: affective reaction ($r = -.61$, $p < .01$), aberrant behavior ($r = -.45$, $p < .001$), strain ($r = -.50$, $p < .01$), school absence ($r = -.16$, $p < .05$) and drug use ($r = -.26$, $p < .001$). The relationship between hardiness and the response styles was variable. The strongest relationship was found between hardiness and social desirability ($r = .68$, $p < .001$) while a low correlation was shown between hardiness and acquiescence ($r = -.10$, $p =$ NS). A moderate but positive correlation was demonstrated with defensiveness ($r = .31$, $p < .01$). Self-esteem, the personality variable administered for the purpose of investigating the convergent validity of the hardiness scale for adolescents was found to have a substantial, positive relationship ($r = .60$, $p < .001$).

Hardiness as a stress resistant resource in an adolescent population was investigated using a multiple regression approach. Five regression analyses investigating the stress - affective reaction relationship, the stress - behavioral adjustment relationship, the stress - strain relationship, the stress - school absence relationship and the stress - drug use relationship were conducted. No joint effects for stress and hardiness were found, although a significant negative effect for hardiness on each behavioral outcome, except for school absence, was obtained.

Low but significant relationships also were found between the sociodemographic variables and four of the five outcome measures: affective reaction, aberrant behavior, strain and drug use. As the result of these correlations, the outcome measures were regressed on sociodemographics, SLE's, hardiness and the interaction between hardiness and stress.

Conclusion

Hardiness was found to demonstrate significant main effects for strain, drug use, aberrant behavior and affective reactions over and above the effects of any sociodemographic variables. Hardiness was not found to be a positive resource for school absenteeism. Inclusion of the sociodemographic variables in the regression equation also yielded a significant interaction between hardiness and stressful life events for drug use. When age and to a lesser extent, socioeconomic factors were controlled, the joint effect between the hardy personality and stress accounted for 3 percent of the variance in adolescent drug use.

The multidimensional outcome measures were differentially affected by the socioeconomic factors. Sex was identified as an important variable for predicting behavioral adjustment, composed of socially deviant attitudes, rebelliousness and repression items. The negative relationship between sex and behavioral adjustment indicated a tendency for males to report more socially deviant attitudes, rebelliousness and repression than females. SES was found to be a predictor of increased reporting of subjective stress/strain and age was identified as being the most important sociodemographic characteristic in the prediction of drug use (i.e., the older the adolescent the more reported drug experimentation).

Conceptualization of hardiness as a stress resistance resource in adolescents was given empirical support. Hardiness acted as a buffer, moderating the effects of stress for using drugs/alcohol and was directly influential in the prediction of aberrant behavior and affective reactions indicating potential directions for intervention efforts with inner-city youth. Nevertheless, the role of social desirability as well as the age and sex should be important considerations when interpreting research findings or developing support programs for an adolescent population.

Bibliography

Adelson, J. (Ed.) (1980). Handbook of adolescent psychology. New York: Wiley.

Beall, S. and Schmidt, G. (1984). Development of a youth adaptation rating scale. Journal of Occupational School Health, 54(5), 197-200.

Cohen, J and Cohen, P. (1983). Applied multiple regression/correlation for the behavioral sciences. Hillsdale, N.J.: Lawrence Erlbaum.

Coopersmith, S. (1981). Manual for the Self-Esteem Inventories. Palo Alto, CA: Consulting Psychologists.

Damarin, F. and Messick, S. (1965). Response styles as personality variables: A theoretical integration of multivariate research. Research Memorandum 65-10. Princeton, N.J.: Educational Testing Service.

Garmezy, N. and Rutter, M. (1983). Stress, coping and development in children. New York: McGraw-Hill.

Hannah, T. E. and Morrissey, C. (1987). Correlates of psychological hardiness in Canadian adolescents. Journal of School Psychology, 27(4), 339-344.

Hull, J. G., Van Treuren, R. R., and Virnelli, S. (1987). Hardiness and health: A critique and alternative approach. Journal of Personality and Social Psychology, 53, 518-530.

Jackson, D. N. (1985, August). Development of the Differential Personality Inventory. Presented at a symposium on Development and Standardization of the Differential Personality Inventory, Lee B. Sechrest, Chair, 93rd Annual Convention of the American Psychological Association, Los Angeles, CA.

Jackson, D. N. (1975). The Differential Personality Inventory Manual. Goshen, NY: Research Psychologists Press.

Jackson, D. N. (1971). The dynamics of structured personality tests. Psychological Review, 78, 229-248.

Kobasa, S. C., (1982). Commitment and coping in stress-resistance among lawyers. Journal of Personality and Social Psychology, 42, 707-717.

Kobasa, S. C., (1979). Personality and resistance to illness. American Journal of Community Psychology, 7(4), 413-423.

Kobasa, S. C. (1979). Stressful life events, personality and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1-11.

Kokenes, B. (1974). Grade level differences in factors of self-esteem. Developmental Psychology, 10, 954-958.

Lewis, C. (1988). Personality and the stress-adjustment relationship during adolescence and the early adult transition: A longitudinal epidemiologic perspective. Unpublished doctoral dissertation. Graduate Center of the City University of New York.

Maddi. S. R. (1981). Roundtable discussion: Current research and conceptualizations on stress responsivity. In C. Dickinson Moore (Ed.) Adolescence and stress: Report of a NIMH conference. U. S. Department of Health and Human Services, Public Health Service-Alcohol, Drug Abuse and Mental Health Administration.

Mecca, F A., Smelser, J. L. and Vasconcellos, M. (Eds.). (1989). The social importance of self esteem. Los Angeles: University of California.

BEST COPY AVAILABLE

Messick, S. (1989). Validity. In R. Linn (Ed.), Educational Measurement. New York: Macmillan, 13 -103.

Morrissey, C. and Hannah, T. E. (1987). Measurement of psychological hardiness in adolescents. Journal of Genetic Psychology, 48(3), 393-395.

Murphy, L. B. and Moriarity, A. E. (1976). Vulnerability, coping and growth: From infancy to adolescence. New Haven: Yale.

Muuss, R. (1982). Theories of Adolescence. New York: Random House.

Nunnally, J. C. (1978). Psychometric theory. New York: McGraw-Hill.

Pedhazur, E. J. (1973). Multiple regression in behavioral research: Explanation and Prediction. New York: Holt, Rinehart and Winston.

Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Rummel, R. J. (1970). Applied factor analysis. Evanston: Northwestern University.

Rutter, M. (1983). Stress, coping and development. In N. Garmezy and M. Rutter (Eds.). Stress, coping and development in children. New York: McGraw-Hill.

Scheier, M. F., and Carver, C. S. (1985). Optimism, coping and health: Assessment and implications of generalized outcome expectancies. Health Psychology, 4, 219-247.

Schmidt, G. and Beall, S. (1984). Development of a youth adaptation rating scale. Journal of School Health, 54(5), 197-200.

Swearingen, E. M. and Cohen, L. H. (1986). Life events and psychological distress: A prospective study of young adolescents. Journal of Community Psychology, 13, 329-337.

Watson, D. and Pennebaker, J. W. (1989). Health complaints, stress, and distress: exploring the central role of negative affectivity. Psychological Review, 96(2), 234-254.

Werner, E. E. and Smith, R. S. Vulnerable but invincible: A Study of resilient children. New York: McGraw-Hill.

Wiebe, D. J. (1991). Hardiness and stress moderation: A test of proposed mechanisms. Journal of Personality and Social Psychology, 60(1), 89-99.

Wills, T. A. (1986). Stress and coping in early adoldescence: Relationships to substance use in urban school samples. Health Psychology, 5(6), 503-529.

BEST COPY AVAILABLE

Table 1

Multidimensional Outcome Measures Regressed on Social Desirability, Sociodemographics, Stressful Life Events, Hardiness and the Hardiness-Stress Interaction

	Standardized Coefficient (Beta)	Standard Error (Beta)	Incremental R2	Incremental F	p
Affective Reaction (N = 138)					
main effect					
SD	-.84	.05	.70	320.86	.000
SES	-.04	.05			NS
sex	.07	.05			NS
age	-.02	.05			NS
Sociodemographic Block			.01	1.16	
SLE	.06	.05	.00	1.22	NS
hardiness	-.15	.06	.01	5.61	.019
interaction					
HS	-.09	.19	.00	.24	NS
Aberrant Behavior (N = 139)					
main effect					
SD	-.26	.08	.07	10.25	.002
SES	-.07	.08			NS
sex	-.31	.08			.000
age	-.12	.08			NS
Sociodemographic Block			.10	5.61	
SLE	.10	.09	.01	1.33	NS
hardiness	-.43	.10	.10	17.66	.000
interaction					
HS	.32	.30	.01	1.14	NS
Strain (N = 149)					
main effect					
SD	-.66	.06	.44	116.40	.000
SES	.12	.06			NS
sex	.04	.06			NS
age	.06	.06			NS
Sociodemographic Block			.02	1.57	
SLE	.13	.07	.01	3.82	.053
hardiness	-.09	.09	.00	1.14	NS
interaction					
HS	-.16	.25	.00	.41	NS

Table 1 (continued)

Multidimensional Outcome Measures Regressed on Social Desirability, Sociodemographics, Stressful Life Events, Hardiness and the Hardiness-Stress Interaction

	Standardized Coefficient (Beta)	Standard Error (Beta)	Incremental R2	Incremental F	p
School Absence (N = 165)					
main effect					
SD	-.20	.08	.04	6.96	.009
SES	-.01	.08			NS
sex	-.09	.08			NS
age	.01	.08			NS
Sociodemographic Block			.01	.46	
SLE	.11	.08	.01	1.64	NS
hardiness	.04	.11	.00	.16	NS
interaction					
HS	-.01	.32	.00	.00	NS
Drug Use (N = 155)					
main effect					
SD	-.21	.08	.05	7.27	.008
SES	.08	.08			NS
sex	-.08	.08			NS
age	.18	.08			.023
Sociodemographic Block			.05	2.67	
SLE	.21	.09	.04	6.04	.015
hardiness	-.26	.11	.03	6.03	.015
interaction					
HS	-.62	.30	.02	4.35	.039